WE CLAIM:

1. A method of cutting material comprising

connecting a computer to a saw machine, the computer being programmed to optimize cutting of stock to satisfy a cut list,

inputting into the computer: (a) a cut list, (b) a minimum salvage length (Smin), (c) a minimum defect length (Dmin), (d) a maximum drop box length (DBmax),

inputting the length of a piece of material to be processed,

inputting location of any defects in the piece of material,

determining a cutting plan in which: (a) salvage pieces having a length less than Smin are cut to lengths of DBmax or less, and (b) defect pieces having a length less than Dmin are cut to lengths of DBmax or less; except if adjacent salvage and defect pieces have a combined length greater than Dmin then the adjacent pieces are not cut to DBmax or less regardless of their individual lengths.

2. The method of claim 1, further comprising

cutting pieces according to the plan.

3. The method of claim 1, further comprising

automatically printing labels for pieces cut for the cut list.

4. The method of claim 1, further comprising

automatically printing labels for (a) pieces included in the cut list, (b) salvage pieces having a length equal to or greater than Smin, (c) defect pieces having a length equal to or greater than Dmin, and (d) adjacent salvage and defect pieces having a combined length greater than Dmin.

5. The method of claim 1, wherein the pieces cut to lengths of DB max or less are directed to a waste receptacle for destruction or chipping.

6. The method of claim 1, wherein the step of inputting location of any defects is performed without actually marking the material to be cut.

7. The method of claim 1, wherein the step of inputting location of any defects includes interrupting a light beam near a defect boundary.

8. The method of claim 7, wherein the step of inputting location of any defects includes interrupting a light beam at least twice indicating upstream and downstream sides of a defect.

9. A method of cutting material comprising

connecting a computer to a saw machine, the computer being programmed to optimize cutting of stock to satisfy a cut list,

inputting into the computer: (a) a cut list, (b) a minimum salvage length (Smin), (c) a minimum defect length (Dmin), (d) a maximum drop box length (DBmax),

inputting the length of a piece of material to be processed,

inputting location of any defects in the piece of material,

determining a cutting plan in which: (a) salvage pieces less than Smin are cut to lengths of DBmax or less, and (b) defect pieces less than Dmin are cut to lengths of DB max or less.

10. The method of claim 9, wherein if adjacent salvage and defect pieces have a combined length greater than Dmin then the adjacent pieces are not cut to DBmax or less regardless of their individual lengths.

11. The method of claim 9, further comprising

automatically printing labels for pieces included in the cut list, salvage pieces having a length equal to or greater than Smin, and defect pieces having a length equal to or greater than Dmin.

12. The method of claim 11, further comprising

automatically printing labels for adjacent salvage and defect pieces having a combined length equal to or greater than Dmin.

13. The method of claim 9, wherein the step of inputting location of any defects is performed without actually marking the material to be cut.

14. The method of claim 9, wherein the step of inputting location of any defects includes interrupting a light beam near a defect boundary.

15. The method of claim 14, wherein the step of inputting location of any defects includes interrupting a light beam at least twice indicating upstream and downstream sides of a defect.

16. A method of cutting material comprising

providing a computer programmed to optimize cutting of stock to satisfy a cut list,

connecting a computer to a saw machine, the computer being programmed to optimize cutting of stock to satisfy a cut list,

inputting into the computer: (a) a cut list, (b) a minimum salvage length (Smin), and (c) a minimum defect length (Dmin),

inputting the length of a piece of material to be processed,

inputting location of any defects in the piece of material,

determining a cutting plan in which: (a) salvage pieces having a length less than Smin are discarded, and (b) defect pieces having a length less than Dmin are discarded; except if adjacent salvage and defect pieces have a combined length greater than Dmin then the adjacent pieces are saved regardless of their individual lengths.

17. The method of claim 16 further comprising

inputting a maximum drop box length (DBmax) into the computer, and

cutting discarded pieces into lengths equal to or less than DBmax.

18. An apparatus for controlling material processing comprising

a saw machine, and

a computer connected to the saw machine, the computer being programmed to control optimized cutting of stock to satisfy a cut list, and saving of remaining material including salvage pieces having a length equal to or greater than a preselected Smin, and defect pieces having a length equal to or greater than a preselected Dmin.

19. The apparatus of claim 18 wherein the saw machine includes a pusher configured to push a piece of material toward a saw under control of the computer.

20. The apparatus of claim 18, wherein the computer is also programmed to control saving of remaining material including adjacent salvage and defect pieces have a combined length greater than Dmin.

21. The apparatus of claim 18, wherein the computer is also programmed to control automatic printing of labels for pieces cut pursuant to the cut list and saved material.